

WHAT IS CLAIMED IS:

1. A safety needle device for protecting a user against a needle-stick injury, the needle device comprising:

- a needle housing having a distal housing opening;
- a needle disposed within the needle housing and having a distal needle portion extending away therefrom through the distal housing opening;
- an elongate sheath assembly surrounding the needle within the needle housing;
- a biasing member engaged to the sheath assembly and being configured to apply a force thereupon towards the distal housing opening; and
- a trigger member engaged to the biasing member for retaining the sheath assembly within the needle housing against the force urging the sheath assembly towards the distal housing opening, wherein the trigger member is sized and configured to release the biasing member to allow the sheath assembly to transition towards and out of the distal housing opening via the force to thereby enclose the distal needle portion therewith and protect the user against the needle stick injury.

2. The needle device of Claim 1 wherein the needle housing is fabricated from a plastic material.

3. The needle device of Claim 1 wherein the needle housing comprises a lower housing surface having a hold-down platform extending outwardly therefrom.

4. The needle device of Claim 3 wherein the hold-down platform has a generally circular configuration.

5. The needle device of Claim 3 wherein the hold-down platform comprises a layer of padding to provide cushioning when the hold-down platform is applied upon the user.

6. The needle device of Claim 5 wherein the layer of padding is attached underneath the hold-down platform.

7. The needle device of Claim 5 wherein the layer of padding substantially conforms to a configuration of the hold-down platform.

8. The needle device of Claim 5 wherein the layer of padding is fabricated from a foam material.

9. The needle device of Claim 8 wherein the foam material is a closed-cell foam material.

10. The needle device of Claim 1 wherein the needle housing comprises a groove elongated therewithin and communicating with the distal housing opening, the sheath assembly surrounding the needle within the groove.
11. The needle device of Claim 1 wherein the biasing member is a torsional arm.
12. The needle device of Claim 1 wherein the biasing member has an extension and the sheath assembly has a proximal sheath end, the extension being extended from the biasing member to the proximal sheath end for connection therewith.
13. The needle device of Claim 12 wherein the needle housing has inner housing surfaces, the extension being extended generally parallel to the inner housing surfaces.
14. The needle device of Claim 13 wherein the extension has an end portion extending generally perpendicular to the inner housing surfaces, the end portion being connected through the proximal sheath end.
15. The needle device of Claim 14 wherein the end portion is extended generally parallel to the inner housing surfaces towards the biasing member after being connected through the proximal sheath end.
16. The needle device of Claim 12 wherein the needle housing has a lower inner housing surface, the extension being disposed against the lower inner housing surface in abutting contact when the biasing member is released from the trigger member so as to place the proximal sheath end about the distal housing opening.
17. The needle device of Claim 1 wherein the biasing member has an end portion and the trigger member has an inner end forming a tip retaining projection adjacent thereto, the end portion and the tip retaining projection being sized and configured to engage with each other for retaining the sheath assembly within the needle housing.
18. The needle device of Claim 17 wherein the tip retaining projection has a projected end forming an engaging portion, the engaging portion being sized and configured to correspond to the end portion of the biasing member for engagement therewith.
19. The needle device of Claim 18 wherein the engaging portion includes a notch for accommodating and maintaining the end portion of the biasing member therewithin.
20. The needle device of Claim 1 wherein the trigger member has an outer end exposed outside the needle housing, the outer end being sized and configured to be manually pressed toward the needle housing for releasing the biasing member from the trigger member.